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## Potential Conflicts Between Different Forms of Recreation

The sources of information on this subject were published articles and the experiences of the authors. These sources show that conflicts between different forms of recreation use have arisen with increasing frequency in recent years. The root cause for rising conflicts is simply the increase in demand for most outdoor recreation activities. Further complicating the effects of rising demand are changes in the way some activities are pursued. Technology-driven activities like off-road motorized vehicle driving, mountain biking, jet boating, hang gliding, and various forms of mechanical trail use are rising in popularity. Numbers of participants in activities like wildlife viewing, birdwatching, and nature photography also are growing very rapidly. The prospects for conflicts between nature watchers and people participating in technology-based activities are considerable. Land managers, therefore, are being forced to examine more closely the question of access and who gets what, when, and where. Early detection of user conflicts and effective conflict resolution depend on understanding where and how conflicts arise. Resolving a conflict in its initial stages before users ally themselves with larger, better organized interest groups helps to avoid costly political and legal actions.

At least two primary conceptual models help increase understanding of recreation conflict: the cognitive and the normative models. The cognitive model proposes that conflict occurs as a result of goal interference attributed to another's behavior (Gibbons and Ruddell 1995, Jacob and Schreyer 1980). Recreation goals are based on social (such as family affiliation), psychological (such as solitude), and physical (such as exercise) motives. When users with (1) high personal attachment to an activity, (2) high personal attachment to the resource, (3) specific and focused ways of experiencing the environment, and/or (4) low tolerance for other users encounter users with different beliefs and behaviors, there is ample potential for conflict (Jacob and Schreyer 1980).

The normative model assumes that conflict arises when users do not share the same norms or social values, independent of physical presence or actual contact between them (Vaske and others 1995, 2000). Norms are standards of acceptable and unacceptable behaviors for specific places. Examples are an acceptable number of rafters on a whitewater river or the appropriate level of human-induced noise at a campground. Unacceptable behavior may involve both users engaged in the same activity and users in different activities.

Of the two models of conflict, the cognitive approach has received more widespread acceptance. Studies support the role of at least one of the four factors of goal interference as

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influencing conflict (Gibbons and Ruddell 1995, Gramman and Ruddell 1989, Ivy and others 1992, Ramthun 1995). However, there is also support for the social values approach. Vaske and others (1995), for example, attribute conflict in hunting to differences in social values held by hunters and nonhunters.

Although most studies have been done in the parks and forests of the West, most of their findings can be generalized to the South. The bulk of these past studies suggests that recreation conflict is asymmetrical. That is, there is a tendency for one group (mostly traditional and nonmotorized users) to perceive more problems than the other group with whom they are in conflict. This other group, which typically holds an asymmetrical view of the level of conflict. is typically composed of nontraditional, mechanized, or motorized users. This finding of differential levels of perceived conflict holds for cross-country skiing versus snowmobiling in Minnesota (Knopp and Tyger 1973), for oar-powered versus motor-powered whitewater boating in the Grand Canyon (Shelby 1980), for anglers versus water-skiers on Midwest reservoirs (Gramman and Burdge 1981), for paddling canoeists versus motorboaters in the Boundary Waters canoe area (Adelman and others 1982), and for hikers versus mountain bikers in the Rattlesnake National Recreation Area (Watson and others 1991). Ramthun (1995) found that one-third of hikers on a trail near Salt Lake City, UT, sensed conflict with mountain bikers, while less than 6 percent of bikers perceived conflict. Gibbons and Ruddell (1995) found that helicopter skiers in the Wasatch National Forest in Utah reported no conflict, while nonmotorized back-country users reported high levels of conflict.

Two studies specific to the South help our understanding of recreation conflict. In a survey of winter visitors to Bird Island Basin in the Padre Island National Seashore in Texas, Ruddell and Gramman (1994) reported that noise-induced conflict (measured as sensitivity to loud radio playing) was a result of both goal interference and violation of norms. Visitors motivated by "being with people who were considerate of others" were more likely to perceive conflict than were visitors who were motivated by "being with friends and people like themselves." In the second southern study, Ivy and others (1992) found support for asymmetrical conflict. Canoeists perceived more conflict than motorboaters in the backwater of the Everglades National Park in Florida.

Conflict resolution may involve both zoning and education. When the source of conflict is goal interference, it is more appropriate to consider zoning by time, space, or activity. Zoning can ensure that different types of users are physically separated. Zoning seems less effective when the conflict is attributable to differing social values, because such conflict does not necessarily require physical presence or actual contact between users. Off- and on-site education and information campaigns can highlight rules and regulations, as well as acceptable behaviors, for engaging in various recreation activities. An education campaign for a ballot initiative for spring black bear hunting in Colorado demonstrated that education can reduce the potential for conflict (Manfredo and others 1995).

Settings where conflict is likely to occur include trails, back country, developed sites, rivers, lakes, streams, and roads. For each of these settings, we used the NSRE participation trends

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data to examine activities likely to be in conflict because of growth in numbers of participants (table 11.1). We looked at both numbers of people reporting participation in 2000 and at percent growth in numbers from 1995 to 2000 for each setting. Since some activities may occur in more than one setting, some are listed for more than one setting.

- Trails—The trail activities with the greatest numbers of participants include walking, bicycling, and hiking. Increasing numbers of people participating in these activities on limited trail resources is likely to result in rising conflicts with horseback and off-road motor vehicle riders, who often use the same trails. Backpacking is a fast-rising trail activity, as is horseback riding. These two activities often can be in conflict. The rapid rise in number of day hikers, many of whom hike within the same large areas often used by backpackers, may result in greater perceived crowding by backpackers, who typically are seeking relative solitude.
- Back country—Viewing and photographing wildlife, viewing and photographing birds, and day
  hiking are the most popular of activities that typically occur in back-country settings. For the
  most part, these are also among the fastest growing of outdoor activities. People who like to
  view and photograph nature often disapprove of hunting, so conflicts with hunters are likely.
  Hikers and viewers seeking solitude also are likely to perceive conflicts arising from motorized
  users.
- Developed sites—A wide variety of activities occurs in or near developed sites, such as campgrounds and picnic areas. Family gatherings out of doors, walking, visiting nature centers, and picnicking are among the most popular developed-site activities. At the same time, jet skiing is one of the fastest growing of outdoor activities, and it is often associated with developed sites. Noise and turbulence can cause conflicts with on-shore users of these developed sites. Conflicts involving developed sites, however, are likely to be fewer, and less contentious, than in many other settings because developed sites are designed to accommodate larger numbers and a wider variety of users at one time, and users expect to see other people.
- **Streams and whitewater**—Water attracts a wide variety of visitors, including swimmers, viewers of fish, anglers, and users of muscle- and motor-powered watercraft. The possibilities of conflict are obvious. For the most part, all the uses just listed are incompatible with one another.
- Roads and their nearby environs—Roads are the primary means of accessing forests for many forms of recreation. Future conflicts are most likely to be experienced through traffic problems, crowding of access areas, and incompatible uses.

From the standpoint of supply of recreation opportunities, one of the most difficult types of conflict is between users and owners of private tracts. These conflicts are a problem because they can lead to posting and a shrinking of supply. Most of the forested land in the South is privately owned, and most private forest tracts are owned by individuals and families. Results from the 1995 National Private Landowner Survey (Teasley and others 1999) tell of some of the possibilities for conflict.

About 59 percent of individual southern landowners have indicated that improving wildlife, water, aesthetics, and other natural components of their land are either a primary or secondary emphasis in their land management. Just over 7 percent emphasize making money from their land. Sometimes landowners encounter public use effects that can be incompatible with their land conservation goals. The more prominent of these problems include dumping garbage,

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littering, illegal hunting and fishing, damage to fences and gates, damage to roads, disturbance of wildlife, and careless shooting. About 41 percent of owners in the South post their land. The most common reasons for posting are to know who is on the property, to keep people out who do not have permission, to keep people out that the owner does not know, and to avoid property damage. Of owners who post, 81 percent anticipate posting the same acreage in the future, but an additional 16 percent anticipate posting more land.

Increasing demands for off-road vehicle use, hunting, fishing, and other of the more consumptive recreation activities are likely to bring about more conflicts between recreation participants and landowners in the future. In part as a response, many of the higher income residents of the South are purchasing their own land for personal recreation pursuits. Land purchased for the owner's personal recreation is less likely to be open to others for recreation. Conflicts are likely to continue to grow as a result of rising demands for access to private land, even though the owners have no obligation to provide public access.

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